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09/772,287	01/29/2001	Yong Ho Son	DIVA/253	9290

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MOSER, PATTERSON & SHERIDAN, LLP/
SEDNA PATENT SERVICES, LLC
595 SHREWSBURY AVENUE
SUITE 100
SHREWSBURY, NJ 07702

EXAMINER	
USTARIS, JOSEPH G	
ART UNIT	**PAPER NUMBER**
2617	

DATE MAILED: 10/20/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/772,287	SON ET AL.	
	Examiner	Art Unit	
	Joseph G. Ustaris	2617	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *02 August 2005*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-33,35 and 36* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-8,13,15-19,21-23,28-30,33,35 and 36* is/are rejected.

7)☒ Claim(s) *9-12, 14, 20, 24-27, 31, and 32* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Response to Amendment

1. This action is in response to the RCE dated 02 August 2005 in application 09/772,287. Claims 1-33, 35, and 36 are pending. Claims 1, 2, 4, 11, and 17 are amended. Claims 35 and 36 are new.

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 02 August 2005 has been entered.

The objection to the abstract is now withdrawn in view of the amendments.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 8, 13, 15-18, 30, and 33 are rejected under 35 U.S.C. 102(b) as being anticipated by Bhagavath (US005835125A).

Regarding claim 1, Bhagavath discloses a method of streaming content via a distribution network (See Fig. 2, fiber optics 205-1 and 205-2) to any of a plurality of

heterogeneous access networks (See Fig. 2, coaxial networks 207-1, 207-2 and Internet 203). The CATV multi-services Head-End or "local streaming server" is able to "retrieve content encapsulated according to an Internet Protocol (IP) packet structure" from the Internet (See Fig. 2, Head-End 201 and Internet 203). The Head-End inherently processes the content from the Internet into a format that is native to the Cable Television coaxial network or "access network" from which the user request originated (See Fig. 2; column 3 lines 16-33). The Head-End then streams the processed content from the Internet to the Cable Television coaxial network or "access network" via fiber network or "distribution network", wherein the fiber network format is different than the coaxial network format.

Regarding claim 8, the system inherently streams the data "in real time" in order to deliver the content to the user upon request (See Fig. 2).

Regarding claim 13, the "access networks" are a CATV coaxial network or "cable network" (See Fig. 2, 207-1 and 207-2) and the Internet or "Internet network" (See Fig. 2, 203).

Regarding claim 15, the system sends content from the CATV coaxial network to the set-top-box (STB) or cable modem or "transmitting content from at least one access network to subscriber equipment of a requester for content" (See Fig. 2).

Regarding claim 16, the system includes CATV coaxial networks and the Internet or "wherein at least one access network comprises a plurality of non-homogeneous access networks" (See Fig. 2).

Claim 17 contains the limitations of claim 1 (wherein the system is also considered an "interactive information distribution system") and is analyzed as previously discussed with respect to that claim. Furthermore, the system includes a Head-End or "at least one stream caching server" that distributes content to a CATV coaxial network and the Internet or "at least one access network" via fiber network or "distribution network" as discussed in claim 1 above (See Fig. 2). The Head-End also serves the function as the "packet processor", where it is "coupled to at least one stream server for processing encapsulated content within said IP packets into at least one packet in a format native to said at least one access network of said plurality of heterogeneous access networks", e.g. the Head-End would process any request from the user, that is on the coaxial network, for content out on the Internet. Once processed, the Head-End would send out the request over the Internet in order to retrieve the requested content (See Fig. 2).

Claim 18 contains the limitations of claims 16 and 17 and is analyzed as previously discussed with respect to those claims.

Claim 30 contains the limitations of claims 13 and 18 and is analyzed as previously discussed with respect to those claims.

Regarding claim 33, the server disclosed by Bhagavath is a "digital broadcast server" (See Fig. 2).

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 2, 4, 5, 19, 28, and 29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bhagavath (US005835125A) in view of Mimura et al. (US006557031B1).

Claim 2 contains the limitations of claim 1 and is analyzed as previously discussed with respect to that claim. However, Bhagavath does not disclose preprocessing content into a format and size optimized for storage and retrieval, encapsulating content in a payload portion of a real time transport (RTP) packet, and encapsulating the RTP packet in the payload portion of an IP packet.

Mimura et al. (Mimura) discloses a system for streaming data or "content" to a CATV coaxial network as well as the Internet (See Fig. 8, 9, and 26; CATV Network, Internet, Access Net). Mimura discloses the system also "preprocesses content into at least one packet" (See Fig. 6) that has a format and size optimized for streaming, which inherently includes "storage and retrieval at a local streaming server" (See Fig. 8, 9, and 26 Video Server, Server, Internet Server). Furthermore, the system "encapsulates at least one packet of content in a payload portion of a real time transport protocol (RTP) packet; and encapsulating the RTP packet in a payload portion of said IP packet" (See column 2 lines 32-54). Therefore, it would have been obvious to one with ordinary skill

in the art at the time the invention was made to modify the Head-End disclosed by Bhagavath to "preprocess content into at least one packet" that has a format and size optimized for "storage and retrieval at a local streaming server" and "encapsulating at least one packet of content in a payload portion of a RTP packet; and encapsulating the RTP packet in a payload portion of said IP packet", as taught by Mimura, in order to increase the capabilities of the Head-End thereby enabling the Head-End to serve a much greater amount of subscribers that are on the Internet and to provide a more efficient means of retrieving content from the Internet for subscribers on the coaxial networks.

Regarding claim 4, the system inherently stores the video data "on a storage medium coupled to said local streaming server" (See Mimura Fig. 8, 9, and 26; Video Server, Server, Internet Server).

Regarding claim 5, the system disclosed by Bhagavath in view of Mimura retrieves the video data from the servers "in response to a user request from at least one access network" (See Mimura Fig. 8, 9, and 26; column 13 line 66 – column 14 line 6).

Claim 19 contains the limitations of claims 2 and 17 and is analyzed as previously discussed with respect to those claims.

Regarding claim 28, Bhagavath in view of Mimura discloses an interworking unit also serves the functions of the "data link converter" where it "transfers content to subscriber equipment of a requester for said content" via Internet and CATV network (See Mimura Fig. 8, 9, and 26).

Regarding claim 29, the data link converter has to extract the content from the IP packet in order to successfully deliver the content over the CATV network (See Mimura Figs. 8-11).

Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Bhagavath (US005835125A) in view of Mimura et al. (US006557031B1) as applied to claims 2, 4, 5, 19, 28, and 29 above, and further in view of Zheng et al. (US006611522B1).

Bhagavath in view of Mimura does not disclose "formatting content to support playback at a quality of service (QoS) corresponding to at least one access network".

Zheng et al. (Zheng) discloses a QoS system for use within an Internet protocol digital communication system. The system is able to schedule and shape the output of the packaged data based on the QoS parameters given for the network and output or "formatting content to support playback at a quality of service (QoS) corresponding to at least one access network" (See column 11 line 34 – column 12 line 14). Therefore, it would have been obvious to one with ordinary skill in the art at the time the invention was made to modify the system and Head-End disclosed by Bhagavath in view of Mimura to "format content to support playback at a quality of service (QoS) corresponding to at least one access network", as taught by Zheng, in order to ensure that the user will receive the video data and for the video data to at the highest quality possible thereby enhancing the user's entertainment experience.

Claims 6 and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bhagavath (US005835125A) in view of Mimura et al. (US006557031B1) as applied to claims 2, 4, 5, 19, 28, and 29 above, and further in view of Wahl (US005898456A).

Bhagavath in view of Mimura does not disclose "retrieving content from a remote stream server that is remotely located from said local stream server in an instance where said content is unavailable from said local stream server".

Wahl discloses a communications system with hierarchical server structure used for video-on-demand services. Wahl discloses that if the user requests a movie that is not available from a local server, the local server then requests the movie from a central server or "retrieving content from a remote stream server that is remotely located from said local stream server in an instance where said content is unavailable from said local stream server" (See column 1 lines 32-39). Therefore, it would have been obvious to one with ordinary skill in the art at the time the invention was made to modify the system and Head-End disclosed by Bhagavath in view of Mimura to "retrieve content from a remote stream server that is remotely located from said local stream server in an instance where said content is unavailable from said local stream server", as taught by Wahl, in order to ensure that the requested video data is successfully delivered to the user.

Regarding claim 7, furthermore Bhagavath in view of Mimura and in further view of Wahl discloses that the "retrieved content from said remote stream server is stored on said storage medium coupled to said local stream server" (See Wahl column 1 lines 35-40). Furthermore, the movies are transferred based on the number of times the

movie has been requested, where movies that are frequently requested are located on the local servers or "in an instance where a predefined user request threshold has been exceeded" and movies less frequently requested are located at the central server (See Wahl column 1 lines 25-47).

Claim 23 is rejected under 35 U.S.C. 103(a) as being unpatentable over Bhagavath (US005835125A) in view of Zheng et al. (US006611522B1).

Claim 23 contains the limitations of claim 17 and is analyzed as previously discussed with respect to that claim. However, Bhagavath does not disclose "formatting content to support playback at a quality of service (QoS) corresponding to at least one access network".

Zheng et al. (Zheng) discloses a QoS system for use within an Internet protocol digital communication system. The system is able to schedule and shape the output of the packaged data based on the QoS parameters given for the network and output or "formatting content to support playback at a quality of service (QoS) corresponding to at least one access network" (See column 11 line 34 – column 12 line 14). Therefore, it would have been obvious to one with ordinary skill in the art at the time the invention was made to modify the system and Head-End disclosed by Bhagavath to "format content to support playback at a quality of service (QoS) corresponding to at least one access network", as taught by Zheng, in order to ensure that the user will receive the video data and for the video data to at the highest quality possible thereby enhancing the user's entertainment experience.

Claims 21 and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bhagavath (US005835125A) in view of Wahl (US005898456A).

Claim 21 contains the limitations of claim 17 and is analyzed as previously discussed with respect to that claim. However, Bhagavath does not disclose "retrieving content from a remote stream server that is remotely located from said local stream server in an instance where said content is unavailable from said local stream server".

Wahl discloses a communications system with hierarchical server structure used for video-on-demand services. Wahl discloses that if the user requests a movie that is not available from a local server, the local server then requests the movie from a central server or "retrieving content from a remote stream server that is remotely located from said local stream server in an instance where said content is unavailable from said local stream server" (See column 1 lines 32-39). Therefore, it would have been obvious to one with ordinary skill in the art at the time the invention was made to modify the system and Head-End disclosed by Bhagavath to "retrieve content from a remote stream server that is remotely located from said local stream server in an instance where said content is unavailable from said local stream server", as taught by Wahl, in order to ensure that the requested video data is successfully delivered to the user.

Regarding claim 22, furthermore Bhagavath in view of Wahl discloses that the "retrieved content from said remote stream server is stored on said storage medium coupled to said local stream server" (See Wahl column 1 lines 35-40). Furthermore, the movies are transferred based on the number of times the movie has been requested,

where movies that are frequently requested are located on the local servers or "in an instance where a predefined user request threshold has been exceeded" and movies less frequently requested are located at the central server (See Wahl column 1 lines 25-47). Also, Bhagavath in view of Wahl discloses that video data is retrieved from a central server if it is unavailable at the local server.

Claims 35 and 36 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bhagavath (US005835125A).

Claim 35 contains the limitations of claim 1 and is analyzed as previously discussed with respect to that claim. However, Bhagavath does not disclose that the distribution network comprises one or more of a synchronous optical network (SONET) and an asynchronous transfer mode (ATM) network.

Official Notice is taken that it is well known to use SONET and ATM networks for distribution. Therefore, it would have been obvious to one with ordinary skill in the art at the time the invention was made to modify the distribution network disclosed by Bhagavath to comprise one or more of a SONET and ATM network in order to provide a more reliable distribution network that uses a well known and established transfer protocol thereby ensuring that the subscriber receives the requested data.

Regarding claim 36, the access networks comprise the Internet or "wide area network" and a CATV coaxial network or "cable television distribution network" (See Fig. 2).

Allowable Subject Matter

4. Claims 9-12, 14, 20, 24-27, 31, and 32 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Regarding claims 9-10, the prior art of record fails to show or fairly suggest transcoding the content prior to storage.

Regarding claims 11-12, the prior art of record fails to show or fairly suggest transcoding the content after storage.

Regarding claim 14, the prior art of record fails to show or fairly suggest extracting content from the IP packet downstream of the distribution network.

Regarding claim 20, the prior art of record fails to show or fairly suggest that the content is stored as IP packets.

Regarding claims 24-26, the prior art of record fails to show or fairly suggest transcoding the content.

Regarding claim 27, the prior art of record fails to show or fairly suggest that each RTP payload is configured as read blocks for transcoding.

Regarding claims 31-32, the prior art of record fails to show or fairly suggest at least on random access data server coupled to the stream server via the distribution network.

Response to Arguments

5. Applicant's arguments with respect to claims 1-33 have been considered but are moot in view of the new ground(s) of rejection.

In response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

Applicant is reminded that although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

Conclusion

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Joseph G. Ustaris whose telephone number is 571-272-7383. The examiner can normally be reached on M-F 7:30-5PM; Alternate Fridays off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Christopher S. Kelley can be reached on 571-272-7331. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

JGU
October 17, 2005

VIVEK SRIVASTAVA
PRIMARY EXAMINER